

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY



(Chapter II of the Patent Cooperation Treaty)

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(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 904152	FOR FURTHER ACTION See Form PCT/PEA/416	
International application No. PCT/JP2004/010169	International filing date (day/month/year) 09.07.2004	Priority date (day/month/year) 28.07.2003
International Patent Classification (IPC) or national classification and IPC F16H61/04		
Applicant TOYOTA JIDOSHA KABUSHIKI KAISHA et al		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand 16.12.2004	Date of completion of this report 20.09.2005	
Name and mailing address of the International preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Zevelakis, N Telephone No. +31 70 340-4813 	

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/JP2004/010169

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-16 as originally filed

Claims, Numbers

1-14 as originally filed

Drawings, Sheets

1/6-6/6 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing *(specify)*:
 - ☐ any table(s) related to sequence listing *(specify)*:
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing *(specify)*:
 - ☐ any table(s) related to sequence listing *(specify)*:

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/JP2004/010169

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-14
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-14
Industrial applicability (IA)	Yes: Claims	1-14
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1 The following documents are referred to in this communication:

D1: US-A-5 107 723 (YAMASHITA HIROSHI ET AL) 28 April 1992 (1992-04-28)

D2: US 2002/187877 A1 (WILMANOWICZ MAREK L ET AL) 12 December 2002 (2002-12-12)

2 INDEPENDENT CLAIMS 1 AND 8

2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not inventive in the sense of Article 33(3) PCT.
Document D1 discloses (the references in parenthesis applying to this document):

A shift control device of an automatic transmission (12) transmitting power from an engine (10), said automatic transmission (12) including a friction engagement element (14) that is engaged in a drive position and disengaged in a non-drive positions an engagement pressure of said friction engagement element (14) being controllable by direct pressure, comprising:
detection means for detecting a shift from said non-drive position to said drive position;
detection means (24) for detecting an input revolution number to said automatic transmission (12); and
control means (26) for starting engagement of said friction engagement element (14) by direct pressure control in response to detection of said input revolution number having been decreased to a predetermined revolution number by said output lowering process.

Note that the subject matter of claim one differs from D1 in that there are provided output means for outputting a command to execute an output lowering process of said engine to an engine control device in response to detection of the shift to said

drive position.

The problem can be regarded as how to reduce the output of the engine so that it is not too high to engage the transmission in a drive state.

The solution would be an introduction of "output means (engine control means)" as described in document D2. Therefore the features disclosed in D1 and D2 would be combined by the skilled person, without exercise of any inventive skills in order to solve the problem posed. The proposed solution thus cannot be considered inventive.

The comments above apply also for claim 8. Therefore, the subject matter of claims 1 and 8 lack an inventive step in the sense of Article 33(3) PCT.

3 INDEPENDENT CLAIMS 4 AND 11.

3.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 4 is not inventive in the sense of Article 33(3) PCT.

Document D1 discloses (the references in parenthesis applying to this document):

A shift control device of an automatic transmission (12) transmitting power from an engine (10), said automatic transmission (12) including a friction engagement element (14) that is engaged in a drive position and disengaged in a non-drive position, an engagement pressure of said friction engagement element (14) being controllable by direct pressure, comprising:

detection means (24) for detecting a shift from said non-drive position to said drive position;

control means (26) for starting engagement of said friction engagement element (14) by direct pressure control after a lapse of a predetermined period of time following initiation of said output lowering process.

Note that referring to the feature "output means for outputting a command ... to said drive position" a similar argumentation as in paragraph 2.1 (for claims 1 and 8) concerning the engine control applies.

The comments above apply also for claim 11. Therefore, the subject matter of claims 4 and 11 lack an inventive step in the sense of Article 33(3) PCT.

4 Additionally, even though not specifically mentioned, while operating a shift control device of an automatic transmission as known from D1 and D2 the step as recited in

claims 1, 8 and 4, 11, namely the step of starting the engagement of the friction engagement element when the input revolution number to the transmission is lowered, is quite obviously performed when using the system of D1 since it comes as a matter of fact to the person skilled in the art, to engage a clutch when the appropriate (lowered) rpm have been reached.

5. DEPENDENT CLAIMS 2, 3, 5-7, 9, 10, 12-14

Dependent claims 2, 3, 5-7, 9, 10, 12-14 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect to inventive step (Article 33(2) and (3) PCT).